

**WHAT IS CLAIMED IS:**

1. A horizontally opposed four-stroke internal combustion engine comprising:  
a cylinder block having at least one cylinder bore horizontally extended to both  
ends thereof;

5 at least one piston inserted within the at least one cylinder bore, each of the at least  
one cylinder bores being divided into two combustion chambers; and  
a pair of crankshafts respectively disposed at both ends of the cylinder block and  
driven by the at least one piston reciprocating in the at least one cylinder bore.

10 2. The engine of claim 1, wherein each of the combustion chambers is covered  
with a cylinder head on which at least one intake valve, at least one exhaust valve, and a  
spark plug are mounted.

3. The engine of claim 2, wherein a hole is formed through the cylinder head  
such that the both ends of the piston are extended through the hole.

15 4. The engine of claim 3, wherein a piston ring is interposed between the hole  
and the end of the piston.

5. The engine of claim 4, wherein each end of the piston is respectively  
connected to one of the pair of crankshafts with a connecting rod.

6. The engine of claim 5, further comprising:

20 at least one valve for each of intake and exhaust for each of the combustion  
chambers; and

at least one cam shaft for driving the at least one valve,  
wherein the cam shaft is driven by the crankshaft through gears.

25 7. The engine of claim 6, wherein the two combustion chambers formed by  
being divided by the piston include a first combustion chamber and a second combustion  
chamber,

wherein the relationship between the four strokes in the two combustion chambers is as shown in the table below:

|                                    | 1 <sup>st</sup> stroke | 2 <sup>nd</sup> stroke | 3 <sup>rd</sup> stroke | 4 <sup>th</sup> stroke |
|------------------------------------|------------------------|------------------------|------------------------|------------------------|
| 1 <sup>st</sup> combustion chamber | Intake                 | Comp.                  | Ignition               | Exhaust                |
| 2 <sup>nd</sup> combustion chamber | Comp.                  | Ignition               | Exhaust                | Intake                 |

8. An internal combustion engine, comprising:

5 a cylinder block defining an engine cylinder having two ends; and  
a piston configured and dimensioned to be disposed within said engine cylinder;  
wherein said piston reciprocates within said engine cylinder and interacts  
with each said end of said engine cylinder.

9. The engine of claim 8, wherein each end further comprises intake and  
10 exhaust valves.

10. The engine of claim 8, wherein said piston is coupled through said end to a  
crankshaft.

11. The engine of claim 8, wherein said piston is coupled through each said end  
to crankshafts.

15 12. The engine of claim 8, further comprising a spark plug disposed near each  
end.

13. An internal combustion engine, comprising:  
a cylinder block defining an engine cylinder having two substantially closed ends;  
and  
20 a piston configured and dimensioned to be disposed within said engine cylinder;  
wherein said piston compresses gaseous matter towards each end upon  
reciprocating toward each end.

14. The engine of claim 13, wherein each end further comprises intake and exhaust valves.

15. The engine of claim 13, wherein said piston is coupled through said end to a crankshaft.

5 16. The engine of claim 13, wherein said piston is coupled through each said end to crankshafts.

17. The engine of claim 13, further comprising a spark plug disposed near each end.